

1. An information recording method of recording information onto a phase-change disc while varying a linear velocity so as to allow the information to correspond to an edge of a recording mark formed in radiating light pulses from a light source to the phase-change disc, the method comprising the steps of:

controlling said light source in accordance with a recording parameter corresponding to a linear velocity for an area on which the information is to be recorded, the recording parameter being obtained based on a correlation between said linear velocities and said recording parameters suitable for said linear velocities.

3. The information recording method of according to claim 1, wherein when the test writing is performed, a high linear velocity is changed to a low linear velocity, thus obtaining the recording parameter suitable for each of the linear velocities.

4. The information recording method according to claim 1, wherein when the test writing is performed, a dependency of a light pulse shape on the linear velocity is compensated.

5. An information recording method of recording information onto a phase-change disc while varying a linear velocity so as to allow the information to correspond to an edge of a recording mark formed in radiating light pulses from a light source to the phase-change disc, the method comprising the steps of:

performing test writing for inner and outer periphery zones of the disc at substantially equal linear velocities to each other, thus obtaining a recording

parameter suitable for the inner periphery of the disc and a recording parameter suitable for the outer periphery thereof

obtaining a recording parameter correction coefficient at a position with respect to a disc radius based on the recording parameter suitable for the inner periphery of the disc and the recording parameter suitable for the outer periphery thereof; and

correcting a recording parameter corresponding to a linear velocity at an area onto which the information is to be recorded, thus controlling said light source in accordance with said corrected recording parameter.

6. The information recording method according to claim 5, wherein the recording parameter corresponding to said linear velocity at the area onto which the information is to be recorded is obtained based on the recording parameter suitable for each of the respective linear velocities obtained by performing the test writing for the outer periphery of said disc at the different linear velocities.

7. The information recording method according to claim 1, wherein said recording parameter includes recording power, erase power and a pulse width.

8. An optical disc apparatus which includes: an optical head having a light source radiating light onto an optical disc and a photodetector for detecting the light reflected from said optical disc; optical head driving means for driving said optical head relative to said optical disc; disc driving means for rotationally driving said optical disc while varying a linear velocity at a position of said optical head; and recording waveform generating means for generating a recording waveform to drive said light source, and which records information so as to allow the information to correspond to an edge of a recording mark, the optical disc apparatus further comprising:

means for performing test writing at a plurality of linear velocities for an outer periphery zone of said optical disc, thus obtaining a recording parameter

suitable for each of said linear velocities,

wherein the recording waveform generating means generates a recording waveform based on a recording parameter corresponding to a linear velocity of an area onto which information is to be recorded, the recording parameter being obtained based on a correlation between each of the linear velocities and the recording parameter suitable for each of the linear velocities.

9. An optical disc apparatus which includes: a optical head having a light source radiating light onto an optical disc and a photodetector for detecting the light reflected from said optical disc; optical head driving means for driving said optical head relative to said optical disc; disc driving means for rotationally driving said optical disc while varying a linear velocity at a position of the optical head; and recording waveform generating means for generating a recording waveform to drive the light source, and which records information so as to allow the information to correspond to an edge of a recording mark, the optical disc apparatus further comprising:

means for performing test writing for inner and outer periphery zones of said optical disc at substantially equal linear velocities, thus obtaining recording parameters suitable for the inner and outer periphery zones of said optical disc, and for obtaining a recording parameter correction coefficient at a position with respect to a disc radius based on the recording parameters respectively suitable for the inner and outer periphery zones,

wherein the recording waveform generating means corrects, by use of the recording parameter correction coefficient, a recording parameter corresponding to a linear velocity of an area onto which information is to be recorded and generates a recording waveform based on the corrected recording parameter.

10. The optical disc apparatus according to claim 8, wherein said recording parameter includes recording power, erase power and a pulse width.

0930269-084601
FOIA(b)(7) - D